



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/486,561	02/29/00	HASHIMOTO	105030

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MMC1/0226

EXAMINER
CRUZ, L

ART UNIT 2815	PAPER NUMBER
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DATE MAILED: 02/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/486,561

Applicant(s)

HASHIMOTO, NOBUAKI

Examiner

Lourdes C. Cruz

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-7 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 February 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

This office Action is in response to an Election filed January 16, 2001.

Applicant's election with traverse of Claims 8-15 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that "the search and examination of the entire application could be performed without serious burden". This is not found persuasive because as explained in the Election Restriction requirement, searching the whole Application implies searching for method claims, which are classified in a different class, putting a serious burden on the examiner.

The requirement is still deemed proper and is therefore made **FINAL**.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "34" and "36" have both been used to designate solder balls. Correction is required.

Claim Objections

Claims 13-15 are objected to because of the following informalities: The claims are improperly drafted. The dependency of the claims should be stated at the preamble of the claim. Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

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41. 2-12-01
Claims 11¹³, 14¹ and 15 are rejected under 35 U.S.C. 112, -second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the whole". There is insufficient antecedent basis for this limitation in the claim. The examiner suggests redrafting the claim to recite "...to cover aid interconnect pattern in its entirety".

Claim 13 is indefinite because it is dependent upon a non-elected method claim. Furthermore, this claim sets forth no additional structure or method steps therefore, this claim fails to further limit any of the previous claims.

Regarding claim 14, since this claim sets forth no structure of the circuit board, the meets and bounds of this claim cannot be determined.

Likewise, claim 15 is indefinite since no structure has been defined for the so-called "electronic instrument".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

41. 2-12-01
Claims 8-12¹³ and 14-15¹ are rejected under 35 U.S.C. 102(e) as being anticipated by Canning et al. (US 5783465).

Canning discloses a device comprising a chip 13 having electrodes 14, a substrate 11 having an interconnect pattern 12; and an adhesive 15; wherein said electrodes and said interconnect pattern are electrically connected; and wherein said adhesive is interposed between a surface of said substrate on which said interconnect pattern is formed and a surface of said chip on which the electrodes are formed, so as to cover at least a part of a lateral surface of said semiconductor chip.

Canning also discloses an adhesive 15 with conductive particles 16 (**Claim 10**) substantially covering the lateral surface of the chip (**Claim 9**). See that '465's adhesive covers the interconnect pattern entirely (**Claim 11**).

Claim 13 is considered a Product by Process claim therefore, for the reasons provided above, Canning discloses all the structure set forth in this claim.

Regarding claims 14 and 15, it is inherent that 11 could be a PCB or PWB, as commonly used and known in the art.

With regard to claim 12, see that Canning teaches a shading material – pigment—(Col. 5, lines 14+).

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Komiyama et al., Endo et al., Shiotsuka et al, and Kuribayashi et al. disclose semiconductor devices with electrodes, being bonded to a PCB having an interconnect pattern through a particle containing adhesive, wherein said adhesive comprises a dye.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lourdes C. Cruz whose telephone number is 707-306-5691. The examiner can normally be reached on M-F 8:00- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 703-308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Lourdes C. Cruz
Examiner
Art Unit 2815


Lourdes Cruz
February 9, 2001


EDDIE C. LEE
PRIMARY EXAMINER